

REMARKS

In view of the foregoing amendments and the following remarks, reconsideration of the present application is respectfully requested.

Summary of Disposition of Claims

Claims 1-44 are pending in this application. Of the above claims, claims 4-7, 12, 13, and 38-44 have been withdrawn from consideration, pursuant to a provisional election by applicant under 37 CFR 1.142(a).

It is noted with appreciation that claims 1-3, 8-11, 14-20, 25-27, and 30-33 have been allowed. Claims 34-37 have been rejected, and claims 21-24, 28, and 29 have been objected to.

Election/Restrictions

It is noted that applicants' traverse to the examiner's requirement for restriction has been considered and rejected, and that this requirement has been made final.

Objection to Drawings

The examiner has objected to the drawings because they include reference numbers which are not mentioned in the specification. To overcome this objection, applicants have amended the specification at pages 9 and 10 to add the numerals "37a" and "37b," and to reference FIG. 1 as well as FIG. 2.

The examiner further objects to the drawings because they do not include the numeral "94" at page 16, line 11 of the specification. To overcome this objection, the numeral "94" has been changed to "101," which is shown in the drawings.

Objection to Specification and Amendment to
Summary of Invention and Abstract

The examiner's objection to the specification has been overcome by the above-mentioned correction to the specification at page 16, line 11. It is also noted that applicants have amended the Summary of the Invention and the Abstract to change the references made to "light reduction cover element" therein to "brightness reduction cover element."

Claim Objections

Claims 21-24, 28, 29, and 34-37 have been objected to because of a variety of informalities. To overcome the examiner's objections, claims 21, 28, and 35-37 have been amended to correct the informalities noted by the examiner.

Claim Rejections – 35 USC § 112

Claims 35-37 stand rejected under 35 USC § 112, second paragraph, as being indefinite. In rejecting these claims, the examiner states that, in respect to claim 35, it is not clear how the brightness reduction cover element simulates a fluorescent lamp while the cover element has a substantially semi-cylindrical shape, and in respect to claims 36 and 37, it is not clear how the brightness reduction cover element simulates a tubular shaped fluorescent lamp while the cover element has a substantially semi-circular shape.

In response to the examiner's inquiries, it is noted that the semi-cylindrical brightness reduction cover element simulates a tubular shaped fluorescent lamp when viewed from the direction of the bottom surface portion of the light source, which is covered by the brightness reduction cover element. When viewed from this direction, the top portions of a lamp would not normally be seen

and, though semi-circular, the cover element appears as it would if it were a complete cylinder. To clarify these claims, claims 35-37 have been amended to recite that the simulation occurs when the cover element is "viewed from the direction of the bottom surface of the light source," which in the case of claim 36 is a high output T5 fluorescent lamp and, in the case of claim 37, is a regular T5 fluorescent lamp. In view of these amendments, it is submitted that claims 35-37 are definite and meet the requirements of 35 USC §112, second paragraph.

Claim Rejections – 35 USC § 102

Claim 34 stands rejected under 35 USC § 102(b) as being anticipated by Herst, et al. Claim 34 recites a method of producing direct and indirect lighting from an active light source having top and bottom surface portions with relatively high surface brightness. The method recited in Claim 34 is comprised of two steps:

1. Producing uplight for indirect lighting directly from the top surface portion of the light source, and
2. Producing downlight for direct lighting through a brightness reduction cover element positioned below and in close proximity to the bottom surface portion of the light source.

Claim 34 additionally contains the limitation that the brightness reduction cover element is sized and shaped to surround the bottom surface portion of the light source so as to simulate a relatively low brightness light source having a larger surface area than the surface area of the active high-output light source.

Herst et al. (US 4,573,111) discloses a lighting fixture lens design having certain color striped characteristics. Various embodiments of the color striped lens are disclosed. In Figs. 1 and 2, the color striped lens is disclosed in an embodiment used as a lens cover for a totally direct lighting fixture, sometimes referred to as a downlight. In Figs. 3-9, the lens embodiments are side lenses used on a totally or substantially totally indirect lighting fixture, as shown in Fig. 3. Herst et al. does not disclose a direct-indirect fixture wherein uplight for indirect lighting is produced directly from the top surface of the light source, while at the same time downlight is produced for downlighting through a brightness reduction cover element positioned below and in close proximity to the bottom surface portion of the light source. In Herst et al., either uplight is produced in the case of the direct lighting fixture, or downlight is produced in the case of the direct lighting fixture, but not both within the same fixture.

Herst et al. also does not disclose a brightness reduction cover element in close proximity to the bottom surface of the light source, which is sized and shaped to surround the bottom surface portion of the light source so as to simulate a relatively low brightness light source. In Herst et al., the direct lighting fixture shown in Fig. 1 has a relatively large diameter lens cover 17 which is neither placed in close proximity to the bottom surface of lamps 15, nor is it sized and shaped to surround the bottom surface portion of lamps 15 so as to simulate a relatively low brightness light source, such as a larger diameter fluorescent tube. The lens cover 17 of Herst et al. would not be mistaken for a lamp, but would be simply seen for what it is: a lens cover.

Thus, it is respectfully submitted that Herst et al. does not anticipate the method recited in

Claim 34, and it is respectfully requested that the examiner's rejection of this claim under Section 102(b) be withdrawn.

Miscellaneous Claim Amendments

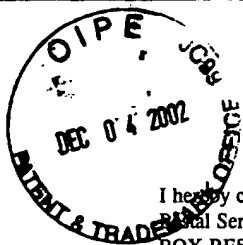
It is noted that applicants have amended claims 37 and 38 to remove the term "tubular shaped" as being redundant in claim 37 and an unnecessary limitation in claim 38.

In view of the foregoing amendments and remarks, applicants submit that the present application is in condition for allowance, request for which is hereby respectfully submitted.

Respectfully submitted,

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Atty Docket: 202-095

Serial No. : 09/641,469

Examiner: Y. Quach Lee
Group No.

2875

Filed : August 17, 2000

Re: Response to Office
Action dated 7/18/02

For : LUMINAIRE HAVING A MOCK LIGHT
SOURCE FOR IMPROVED SOURCE
BRIGHTNESS CONTROL

MARK-UP VERSION OF CHANGES MADE

IN THE SPECIFICATION

Page 6, beginning at line 5:

--In a further aspect of the invention, the luminaire is provided in the form of a direct/indirect luminaire having a housing with both uplight and downlight openings. The [light] brightness reduction cover element, which again is positioned below and in proximity to the bottom surface portion of the active light source, permits an observable source of reduced brightness to be exposed through the housing's downlight opening while permitting the uplight portion of the luminaire to be governed by the high lumen output from the top surface portion of

the smaller active light source. While the invention has particular applicability in this luminaire type, it could also be used in a purely direct luminaire where the high lumen output from the top surface portion of the active light source is redirected by internal optical components of the luminaire through the downlight opening of the luminaire housing.

In still another aspect of the invention, the [light] brightness reduction cover element is replaceably held in its operative position within the luminaire such that cover elements can readily be exchanged to permit modification of the luminaire's brightness and/or color characteristics to meet particular lighting design and application needs.--

Page 9, beginning at line 5:

--As best illustrated in FIGS. 1 and 2, the housing 13 of luminaire 11 has both a bottom downlight opening 27 and a top uplight opening 29 for producing, respectively, the downlight and uplight components of the luminaire's polar light distribution pattern. A conventional parabolic baffle structure 31 is placed in the downlight opening. This baffle structure has a cellular construction consisting of transverse, uniformly spaced parabolic baffle elements 33 connected between reflective side rails 35. The side rails and baffles all have curved "parabolic" specular reflective surfaces of a standard optical design to work with conventional lamp sizes, such as the T8 or T12 lamps. As hereinafter described, rather than seeing the active light source 17, the reflective surfaces of the baffle structure will see and provide shielding for a mock lamp having lower surface brightness than

the active source; specifically, they will reflect the mock source light away from high viewing angles to prevent an image of the mock source and its associated brightness, albeit lower brightness, from being reflected back to the observer at normal viewing positions. Such shielding is necessary to meet brightness control standards in certain applications such as the ANSI RP-1 standard for direct lighting in VDT environments.

--Specifically, as viewed through the downlight opening 27 and as seen by the baffle structure, a mock light source is provided by a passive brightness reduction cover element in the form of an elongated arcuate diffuser cover strip 37 **having ends 37a and 37b, which is** operatively positioned in the housing below and in close proximity to lamp 17. The diffuser cover strip is replaceably held in its operative position below lamp 17 by opposed retainer brackets 39 secured to the center of the luminaire's socket straps 21 by suitable screw fasteners 41 (see FIG. 3). It can be seen that when the diffuser cover strip is operatively held in retaining brackets 39 **at its ends 37a and 37b** it is further supported along the top edges 43 of the transverse baffle elements of the luminaire's baffle structure 31.--

Page 16, beginning at line 8:

--The double arcuate diffuser cover strip 65 of the two-lamp version of the invention shown in FIG. 6 can replaceably be installed in the luminaire's retaining brackets 69 in a manner similar to that described in connection with the installation of the diffuser cover strip 37 in the single-lamp version of the luminaire. Once installed, the double arcuate diffuser cover strip will intercept

light emitted from the bottom surface portion of the lamps, with the arcuate portion 85a of the diffuser strip intercepting light emitted mostly from the bottom surface portion 62a of lamp 63a while the second arcuate portion 85b intercept's light emitted mostly from the bottom surface portion 62b of lamp 63b. The observer who views the fixture through downlight opening 79 will therefore not see the lamps directly, but rather the double arcuate shape of the diffuser strip which will give the appearance of two side-by-side larger diameter fluorescent tubes having a lower surface brightness. On the other hand, the uplight component of the luminaire delivered through the top opening 89 of the luminaire's housing will be produced directly by the high lumen output of the top surface portions 64a, 64b of the side-by-side lamps.

FIGS. 7 and 8 show still further possible embodiments of the brightness reduction cover element of the invention. In FIG. 7, a trough-shaped rather than arcuate diffuser cover strip 91 is positioned below the luminaire's lamp 17 such that the vertical side walls 95 of the cover strip extend upwardly to a position that intercepts light emitted from the bottom surface portion [94] 101 of the lamp up to a suitable cutoff "A" which prevents exposure of the lamp through the luminaire's downlight opening. In this embodiment, the luminous square diffuser strip will simulate a square lamp in the down light opening.--

IN THE CLAIMS

1 21. (Amended) An indirect-direct luminaire having an observable mock light source for
2 improved source brightness control comprising

3 a housing having a bottom downlight opening and top uplight opening,
4 a light source operatively held in said housing above said downlight opening, said light
5 source having a bottom surface portion which faces the downlight opening of said housing and
6 which is exposed therethrough, and a top surface portion facing said top opening for providing
7 indirect lighting therethrough, and

8 a brightness reduction cover element operatively positioned in said housing below and in
9 proximity to the bottom surface portion of said **[active]** light source, said brightness reduction
10 cover element extending upwardly about the bottom surface portion of said light source a
11 sufficient distance to prevent exposure of said light source through the downlight opening of
12 said housing without substantially affecting the indirect lighting produced through the top
13 opening of said housing, said **[diffuser] brightness reduction** cover element being exposed
14 through said downlight opening for providing an observable source of reduced brightness at the
15 approximate position of said **[active]** light source to simulate a relatively low brightness light
16 source within said housing.

1 28. (Amended) The luminaire of claim 25 wherein said **[brightness reduction cover**
2 **element] light diffuser cover strip** is sized, shaped and has brightness characteristics that
3 simulate a standard T12 fluorescent lamp when observed through said downlight opening.

1 34. (Amended) A method of producing direct and indirect lighting from an active light
2 source having top and bottom surface portions with relatively high surface brightness comprising
3 producing uplight for indirect lighting directly from the top surface portion of said light

4 source, and

5 producing downlight for direct lighting through a brightness reduction cover element
6 positioned below and in close proximity to the bottom surface portion of said light source, said
7 brightness reduction cover element being sized and shaped to surround the bottom surface
8 portion of said light source so as to simulate a relatively low brightness light source having a
9 larger surface area than the surface area of said [active high output] light source.

1 35. (Amended) The method of claim 34 wherein said [light] **brightness** reduction cover
2 element has a substantially semi-cylindrical shape and, **when viewed from the direction of the**
3 **bottom surface portion of said light source,** simulates a fluorescent lamp of a desired size
4 having a surface brightness which is lower than the surface brightness of said active light source.

1 36. (Amended) The method of claim 35 wherein said active light source is a high output
2 T5 fluorescent lamp **having top and bottom surface portions with relatively high surface**
3 **brightness** and wherein said [light] **brightness reduction** cover element, **when viewed from**
4 **the direction of the bottom surface portion of said high output T5 fluorescent lamp,**
5 simulates a [tubular shaped] fluorescent lamp having a diameter of between approximately 1
6 and 1 ½ inches.

1 37. (Amended) The method of claim 35 wherein said active light source is a regular T5
2 fluorescent lamp **having top and bottom surface portions with relatively high surface**
3 **brightness** and wherein said [light] **brightness reduction** cover element, **when viewed from**
4 **the direction of the bottom surface portion of said regular T5 fluorescent lamp,** simulates a

5 **[tubular shaped]** fluorescent lamp having a diameter of between approximately 1 and 1 ½
6 inches.

1 38. (Amended) The method of claim 34 wherein said active light source includes at least
2 two side-by-side active **[tubular shaped]** fluorescent lamps and wherein a brightness reduction
3 cover element having a substantially semi-cylindrical shape is provided for each of said
4 fluorescent lamps to simulate two side-by-side fluorescent lamps of a desired size having a
5 surface brightness which is lower than the surface brightness of said active fluorescent lamps.

ABSTRACT OF THE DISCLOSURE

A luminaire has a [light] brightness reduction cover element below and in proximity to the active light source of the luminaire to simulate a larger light source having a lower surface brightness which is exposed through the luminaire's down light opening. For example, where the luminaire has a high output T5 lamp, the [light] brightness reduction cover element can be in the form of a substantially semi-cylindrical opal diffuser cover strip sized to simulate a T8 or T12 lamp. An opal diffuser cover strip having two side-by-side arcuate portions joined at opaque interior edges can be positioned under two side-by-side T5 lamps to simulate side-by-side T8 or T12 lamps. For a direct-indirect luminaires the brightness characteristics of the exposed light source is governed by the lower brightness mock light source, while the uplight distribution of the luminaire is produced from the higher intensity light emitted from the top surface portions of the T5 lamp (or other active light source) for maximum control over the indirect lighting component of the luminaire.